

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	24.114	27.021	18.755	0.000	18.755	20.448	18.694	14.831	15.120	Continuing	Continuing
0602: Eletronics W/F Env Simulation (ECHO)	11.720	12.479	7.955	0.000	7.955	8.264	7.782	7.802	7.797	Continuing	Continuing
0672: Effect Nav E/W (ENEWS)	12.394	12.949	10.800	0.000	10.800	12.184	10.912	7.029	7.323	Continuing	Continuing
9999: Congressional Adds	0.000	1.593	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.593

A. Mission Description and Budget Item Justification

This is a continuing program that consolidates the design, fabrication and integration of Naval Electronic Warfare (EW) threat simulators for increased managerial emphasis and coordination. These simulator development efforts provide realistic Developmental and Operational Test and Evaluation (DT&E/OT&E) environments to test Tri-service EW systems and defensive tactics. These projects develop former Soviet and Free-World Anti-Air and Anti-Ship weapon system simulators in accordance with the Services' requirements.

The 0602 Project, Electronic Warfare Environment Simulation (ECHO), directly supports the Test and Evaluation resource requirements for all Naval Air EW development programs to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Advanced Anti-Radiation Guided Missile (AARGM), ALR-67 (v) 2 and (v) 3, Integrated Defensive Electronic Countermeasures (IDECM) Suite ALQ-214, AAR-47 (v) 2 and the AAR-47 (v) 3, AVR-2, Advanced 6" Expendable, Advanced Strategic Tactical Expendable (ASTE), ALQ-144A, Joint and Allied Threat Awareness System (JATAS), Strike and Assault Directed Infrared Countermeasures (DIRCM), Joint Strike Fighter, EA-18G, LR700, Low Band Transmitter, P-8A, and the Next Generation Jammer (NGJ).

UNCLASSIFIED

R-1 Line Item #140

Page 1 of 15

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		PE 0604256N: Threat Simulator Development			
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	24.714	25.534	0.000	0.000	0.000
Current President's Budget	24.114	27.021	18.755	0.000	18.755
Total Adjustments	-0.600	1.487	18.755	0.000	18.755
• Congressional General Reductions		-0.113			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		1.600			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.600	0.000			
• Program Adjustments	0.000	0.000	18.755	0.000	18.755
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 9999: Congressional Adds					
Congressional Add: Navy Advanced Threat Simulator					
Congressional Add Subtotals for Project: 9999					
Congressional Add Totals for all Projects					
Change Summary Explanation					
Technical: Not applicable.					
Schedule: Not applicable.					
FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.					

UNCLASSIFIED

R-1 Line Item #140

Page 2 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 6: <i>RDT&E Management Support</i>				R-1 ITEM NOMENCLATURE PE 0604256N: <i>Threat Simulator Development</i>				PROJECT 0602: <i>Eletronics W/F Env Simulation (ECHO)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0602: <i>Eletronics W/F Env Simulation (ECHO)</i>	11.720	12.479	7.955	0.000	7.955	8.264	7.782	7.802	7.797	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>The objective of this project is development of necessary simulation facilities and approaches to allow determination of the effectiveness of Electronic Warfare (EW) in real world engagement situations and to support the introduction of modern, effective systems into Naval Aviation. The heavy use of test resources by all Services demonstrates the importance of these assets. The Navy has been very successful in executing all of its major programs, and to date has had no major technical problems.</p> <p>The Electronic Warfare Environment Simulation (ECHO) project is unique because it is the only program within the Department of Defense (DoD) which develops and provides Naval anti-air warfare threat assets for Testing and Evaluation (T&E), and is a critical part of the Office of the Secretary of Defense (OSD) Test Resource Master Plan. The OSD Master Plan employs many ECHO project resources for planning, analysis, testing, and verification of airborne EW equipment.</p> <p>This project directly supports the Test and Evaluation resource requirements for all Naval Air EW development programs, to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Advanced Anti-Radiation Guided Missile (AARGM), ALR-67 (v) 2 and (v) 3, Integrated Defensive Electronic Countermeasures (IDECM) Suite ALQ-214, AAR-47 (v) 2 and the AAR-47 (v) 3, AVR-2, Advanced 6" Expendable, Advanced Strategic Tactical Expendable (ASTE), ALQ-144A, Joint and Allied Threat Awareness System (JATAS), Strike and Assault Directed Infrared Countermeasures (DIRCM), Joint Strike Fighter, EA-18G, LR700, Low Band Transmitter (LBT), P-8A, and the Next Generation Jammer (NGJ).</p> <p>This project provides for the development of an Integrated Air Defense T&E capability to be fielded at each of the three sites comprising the Navy's Tri-Center complex: Naval Air Warfare Center Weapons Division, China Lake and Point Mugu in CA, and Naval Air Warfare Center Aircraft Division, Patuxent River, MD.</p> <p>This project unit includes \$.060 million for the Defense Acquisition Development Fund (DAWDF) in FY 2009.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											

UNCLASSIFIED

R-1 Line Item #140

Page 3 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development		PROJECT 0602: Eletronics W/F Env Simulation (ECHO)	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
ELECTRO-OPTICAL/INFRA-RED (EO/IR) THREAT CAPABILITIES Provide the test community with the modern threat systems necessary for T&E of airborne EO/IR passive alert systems and airborne EO/IR active response systems. Funding decreases from FY 2009 to FY 2010, and FY 2011 based on the priority of the test requirement. Funding for the EO/IR effort decreases due to the completion of the MvM portions of the ICAS in FY09 and the Reactive Plume Simulator (RPS) in FY 2010. These systems will support testing for the Joint and Allied Threat Awareness System (JATAS), Assault DIRCM and other Navy programs. FY 2009 Accomplishments: - Continued the development the Reactive Plume Simulator (RPS). - Completed the development of Many versus Many (MvM) Infrared Countermeasure Assessment System (ICAS). FY 2010 Plans: - Complete the development of the Reactive Plume Simulator (RPS). - Initiate the development of Advanced Imaging Infra-Red (IIR) Seeker. FY 2011 Base Plans: - Complete the development of Advanced Imaging Infra-Red (IIR) Seeker.	1.529	0.950	0.550	0.000	0.550
RADIO FREQUENCY (RF) THREAT CAPABILITIES Provide the test community with the modern threat systems necessary for T&E of airborne RF alert, Situation Awareness, targeting systems and airborne RF response systems. Funding for the RF effort increases from FY 2009 to FY 2010 due to the need to address double digit threat systems (I-32 Transmitter, I-34, and J-32B), and to start development of another high priority long range threat system. Funding decreases from FY 2010 to FY2011 because project completions and	8.229	9.633	6.426	0.000	6.426

UNCLASSIFIED

R-1 Line Item #140

Page 4 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development		PROJECT 0602: Eletronics W/F Env Simulation (ECHO)		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
phasing of continuing project to align with program schedules. These systems are required to test the Joint Strike Fighter, EA-18G, Next Generation Jammer, and other Navy platforms.						
FY 2009 Accomplishments: <ul style="list-style-type: none">- Continued the upgrade of the existing open air range threat simulator to provide a new generation, high fidelity double digit threat I-34 (Advanced Threat Simulator).- Continued the procurement and integration of an advanced threat system through Foreign Materials Acquisition channels.- Continued the upgrade of the I-32 open air simulator by replacing the transmitter.- Continued intel updates to missile, radar, and gun simulations.						
FY 2010 Plans: <ul style="list-style-type: none">- Complete the upgrade of the existing open air range threat simulator to provide a new generation, high fidelity double digit threat I-34 (Advanced Threat Simulator).- Complete the procurement and integration of an advanced threat system through Foreign Materials Acquisition channels.- Complete the upgrade of the I-32 open air simulator by replacing the transmitter.- Complete intel updates to missile, radar, and gun simulations.- Initiate the development of the long range threat systems in laboratories.- Initiate the upgrade to the J-32B Advanced Threat System at Electronic Combat Range (ECR).- Initiate the development of an Advanced Early Warning and Acquisition (EW/ACQ) radar hybrid laboratory simulator.						
FY 2011 Base Plans: <ul style="list-style-type: none">- Continue the development of the long range threat systems in laboratories.- Continue the upgrade to the J-32B Advanced Threat System at Electronic Combat Range (ECR).- Continue the development of an Advanced Early Warning and Acquisition (EW/ACQ) radar hybrid laboratory simulator.						

UNCLASSIFIED

R-1 Line Item #140

Page 5 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development		PROJECT 0602: Eletronics W/F Env Simulation (ECHO)		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
REQUIREMENTS AND VALIDATION		1.902	1.896	0.979	0.000	0.979
Validate and track intel updates of the threat systems necessary for the operation and continuous improvement of Navy laboratories and ranges which provide engineering support, testing and analysis to the developers, integrators, testers and users of systems and technologies that counter or penetrate air defenses.						
Funding decreases from FY 2010 to FY2011 based on the priority of the test requirements Requirements assimilation and project management activities will be reduced to correspond with fewer executing projects.						
FY 2009 Accomplishments:						
- Continued to provide program management, systems engineering, and requirements identification for the development of simulators and foreign material acquisition.						
- Continued to validate simulators and stimulators at the Navy tri-lab centers.						
FY 2010 Plans:						
- Continue to provide program management, systems engineering, and requirements identification for the development of simulators and foreign material acquisition.						
- Continue to validate simulators and stimulators at the Navy tri-lab centers.						
FY 2011 Base Plans:						
- Continue to provide program management, systems engineering, and requirements identification for the development of simulators and foreign material acquisition.						
- Continue to validate simulators and stimulators at the Navy tri-lab centers.						
DAWDF REALIGNMENT		0.060	0.000	0.000	0.000	0.000
FY 2009 Accomplishments:						
- DAWDF Realignment.						

UNCLASSIFIED

R-1 Line Item #140

Page 6 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 6: <i>RDT&E Management Support</i>		R-1 ITEM NOMENCLATURE PE 0604256N: <i>Threat Simulator Development</i>		PROJECT 0602: <i>Eletronics W/F Env Simulation (ECHO)</i>	
B. Accomplishments/Planned Program (\$ in Millions)					
				FY 2009	FY 2010
				FY 2011 Base	FY 2011 OCO
				FY 2011 Total	
Accomplishments/Planned Programs Subtotals				11.720	12.479
				7.955	0.000
				7.955	
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy Not Applicable.					
E. Performance Metrics Successfully achieve Initial Operational Capability of Navy Threat Simulation projects within 60 days of approved schedule and have test capabilities scheduled in support of Navy test programs within 180 days.					

UNCLASSIFIED

R-1 Line Item #140

Page 7 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 6: <i>RDT&E Management Support</i>				R-1 ITEM NOMENCLATURE PE 0604256N: <i>Threat Simulator Development</i>				PROJECT 0672: <i>Effect Nav E/W (ENEWS)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0672: <i>Effect Nav E/W (ENEWS)</i>	12.394	12.949	10.800	0.000	10.800	12.184	10.912	7.029	7.323	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>The objective of the Effectiveness of Navy Electronic Warfare (EW) Systems (ENEWS) Project is the development and application of necessary simulation assets to determine the effectiveness of EW for Navy ships in simulated real-world engagement situations. The project primarily supports the introduction of modern, effective shipboard and offboard EW systems, and tactics for the Surface Navy. The heavy use of ENEWS resources by Naval Sea Systems Command, Operational Test and Evaluation (OT&E) Force, Special Operations, and other EW Research, Development, Test and Evaluation (T&E) agencies speaks to the overall importance of this project. The project provides support for EW system design Engineering Test (ET), Development Test (DT), Operational Test (OT), and the development of utilization tactics. Its quick reaction capabilities have had great impact on crisis situations such as the Lebanon and Libyan crises, Iran Harpoon threat, Persian Gulf crisis, and Operation Desert Shield/Storm. Simulation Display is another ENEWS modeling tool that was developed to support T&E. The display has been adopted by most Department of Defense (DoD) T&E and training ranges to provide visualization of T&E and training scenarios. The primary threat to surface ships is Anti-Ship Capable Missile systems. The ENEWS Project is unique in that it is the only project within DoD dedicated to developing and providing realistic Anti-Ship Capable Missile assets to test and evaluate the effectiveness of shipboard EW systems and tactics against these type threats. The ENEWS Project is a critical part of the Office of the Secretary of Defense Test Resource Master Plan. This plan employs many of the ENEWS assets for planning, analysis, testing, and verification of shipboard and offboard EW systems techniques and tactics. As part of its normal activities, ENEWS provides Development Test and Evaluation (DT&E), OT&E, and Follow-on Operational Test and Evaluation (FOT&E) support to the surface Navy for all ship classes. DT, OT and FOT&E support includes AN/SLQ-32 Surface Electronic Warfare Improvement Program (SEWIP), R17.OX NULKA, Rapid Anti-ship Integrated Defense System, all MK245 Giant tests, advanced InfraRed (IR) decoys, decoy placement, ship IR signature and radar cross section measurement of DDG-51, LPD-17, DD-21 and PC class ships, High Power Microwave program, and other ship self-defense initiatives, including T&E of Future Naval Capability process. In addition, ENEWS assets are regularly employed to test the effectiveness of North Atlantic Treaty Organization ships' EW systems in joint allied exercises. ENEWS assets also support Joint EW exercises that are conducted with Rim of the Pacific (RIMPAC) nations.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
CLASSIFIED PROGRAM						7.774	8.146	5.701	0.000	5.701	

UNCLASSIFIED

R-1 Line Item #140

Page 8 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development		PROJECT 0672: Effect Nav E/W (ENEWS)		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Details about this program are classified.						
Details about this program and any changes are classified.						
FY 2009 Accomplishments: - Details are of a higher classification.						
FY 2010 Plans: - Details are of a higher classification.						
FY 2011 Base Plans: - Details are of a higher classification.						
HARDWARE SIMULATION SYSTEMS		1.707	1.775	1.738	0.000	1.738
Maintain and perform Hardware and Software Upgrades to the inventory of ENEWS flyable and shore based Anti-Ship Capable Missile (ASCM) Electro-Optic/Infrared, Visible and Radio Frequency (RF) Simulators. Perform characterization of IR and RF simulators as part of periodic evaluation of simulation performance and collect performance data for comparison with previously recorded data. Development and maintenance of all simulator control panels.						
FY 2009 Accomplishments: - Continued annual maintenance on ENEWS simulators to support flight/shore based tests. - Continued and completed characterization of KILO, QUEBEC AND TANGO. - Continued and completed transition of the ROMEO simulator into the Naval Research Laboratory Learjet Electronics Pod (NRL LEP). - Completed intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs. - Completed software intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs. - Completed QUEBEC control panel.						

UNCLASSIFIED

R-1 Line Item #140

Page 9 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development		PROJECT 0672: Effect Nav E/W (ENEWS)		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none">- Initiated and complete characterization of INDIA III and PAPA.- Initiated and complete transition of the INDIA III into the NRL LEP.- Initiated and complete VICTOR 1 SIP control panel. <p>Acquisition Workforce Fund:</p> <ul style="list-style-type: none">- Funded DoD Acquisition Workforce Fund. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none">- Continue all efforts of FY 2009, less those noted as completed above.- Initiate intelligence upgrades to MEIR 2-2, MEIR 3, SUMMIT simulators and the MIKE 2 & 3, and VICTOR 1 SIPs.- Initiate software intelligence upgrades to VICTOR 1 SIP and SUMMIT simulators.- Initiate and complete characterization of the TANGO simulator modified for the NRL LEP.- Initiate transition of the TANGO simulator into the NRL LEP- Initiate and complete the INDIA I control panel. <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none">- Continue all efforts of FY 2010- Complete intelligence upgrades to MEIR 2-2, MEIR 3 simulators the MIKE 2 & 3 SIPs.- Complete transition of the TANGO simulator into the NRL LEP- Initiate software intelligence upgrades to the towed FOXTROT 3 simulator.						
SIMULATION VALIDATION AND REQUIREMENTS Provides for the validation of hardware simulators and digital models. Develops reports that contain detailed descriptions and parametric data of the threat simulators or digital models and compares the simulator's parametric data to the actual threats parametric data. Provide technical management functions in support of the ENEWS project; engineering and technical support requirements for the overall efforts of ASCM simulator and digital model development to meet DT/OT testing requirements,		1.047	0.946	0.985	0.000	0.985

UNCLASSIFIED

R-1 Line Item #140

Page 10 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development		PROJECT 0672: Effect Nav E/W (ENEWS)		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
development of detailed test resource requirements and provides an interface between N-912, N-433, Office of Naval Research and other ENEWS oversight activities.						
The decrease between FY 2009 and FY 2010 is due to only one validation report being initiated in FY 2010.						
FY 2009 Accomplishments: <ul style="list-style-type: none">- Continued management of the SVWG.- Continued INDIA I, PAPA and KILO hardware validation reports.- Completed NOVEMBER Vb and TANGO hardware validation reports and submitted to the SVWG.- Initiated and completed update of FY 2009 Program Management Plan.- Initiated and completed FY 2009 quarterly reports, earned value management analysis, progress tracking and analysis.						
FY 2010 Plans: <ul style="list-style-type: none">- Continue all efforts of FY 2009, less those noted as completed above.- Initiate MEIR 3 hardware validation report.- Initiate and complete update of FY 2010 Program Management Plan.- Initiate and complete FY 2010 quarterly reports, earned value management analysis, progress tracking and analysis.						
FY 2011 Base Plans: <ul style="list-style-type: none">- Continue all efforts of FY 2010, less those noted as completed above.- Complete INDIA I, PAPA, and KILO hardware validation reports.- Initiate QUESTION and UNIFORM hardware validation reports.- Initiate and complete update of FY 2011 Program Management Plan.- Initiate and complete FY 2011 quarterly reports, earned value management analysis, progress tracking and analysis.						

UNCLASSIFIED

R-1 Line Item #140

Page 11 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0604256N: Threat Simulator Development		PROJECT 0672: Effect Nav E/W (ENEWS)		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SUPPORT AND COMPUTERS SIMULATION SYSTEMS		1.866	2.082	2.376	0.000	2.376
<p>Perform maintenance and intelligence upgrades to EO/IR, Digital, and RF Laboratory Simulation testing facilities and flight support equipment based on existing and emerging complex threat systems. Development of test and evaluation (T&E) scenarios and environmental modeling to support electronic support (ES) and electronic attack (EA) testing; modify ASCM Digital Models based on the latest intelligence data obtained from threat databases.</p> <p>The increase in the "Support and Computer Simulation Systems" Line between FY09 and FY10 is directly associated with upgrades and improvements to a technically challenging digital model. ENEWS personnel have developed numerous models of non-coherent radar missile seekers, but have minimal experience working with digital models of coherent radar missile seekers. ENEWS is initiating the development of upgrades and improvements for a coherent radar missile seeker digital model in FY10. This development will require additional resources to support the in-depth research required to obtain the detailed knowledge of coherent radar technology required to create a representative model.</p> <p>The increase between FY10 and FY11 is due to the continuation of the upgrades and improvements to the coherent radar missile seeker digital model, plus ENEWS is initiating the development of upgrades and improvements for a millimeter wave radar seeker digital model in FY11.</p> <p>The development of the millimeter wave radar digital model upgrades and improvements also ventures into an area where the ENEWS modelers have minimal experience; thus, this development will require additional resources to support the in-depth research required to obtain the detailed knowledge of millimeter wave radar technology required to create a representative model.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none">- Continued maintenance and upgrades to shore based test facilities and mobile test vans as required to conduct tests in support of SEWIP, NULKA and multi function Electronic Warfare (EW) programs.						

UNCLASSIFIED

R-1 Line Item #140

Page 12 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 6: <i>RDT&E Management Support</i>		R-1 ITEM NOMENCLATURE PE 0604256N: <i>Threat Simulator Development</i>		PROJECT 0672: <i>Effect Nav E/W (ENEWS)</i>		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> - Continued transitioning NRL Codes 5750 and 5770's environmental, threat and platform simulations to the subversion software configuration management program. Upgraded subversion software library as new releases became available. - Continued new digital models of Anti-ship Cruise Missile (ASCM) threats as they became available. - Continued upgrades and maintenance of flight support systems as necessary to support the IR/RF ENEWS simulators. - Continued improvements and intelligence upgrades to ALPHA I, INDIA I, II, III, LIMA, NOVEMBER III, QUEBEC, TANGO, and TANGO II. In all, a total of 9 digital models. - Completed upgrade to cruise missile simulation suite to improve capability to model advanced threats by adding GUI. <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> - Continue all efforts of FY 2009, less those noted as completed above. - Initiate improvements and intelligence upgrades to the COHERENT and FASM digital models. - Initiate intelligence updates and simulation productization for the Long Range High Altitude (LRHA) digital model. <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> - Continue all efforts of FY 2010. - Initiate improvements and intelligence upgrades to the Millimeter Wave (mmW) digital models. 						
Accomplishments/Planned Programs Subtotals		12.394	12.949	10.800	0.000	10.800
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy N/A						

UNCLASSIFIED

R-1 Line Item #140

Page 13 of 15

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 6: <i>RDT&E Management Support</i>	R-1 ITEM NOMENCLATURE PE 0604256N: <i>Threat Simulator Development</i>	PROJECT 0672: <i>Effect Nav E/W (ENEWS)</i>
E. Performance Metrics Performance metrics are discussed within each project (R2a).		

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 6: <i>RDT&E Management Support</i>				R-1 ITEM NOMENCLATURE PE 0604256N: <i>Threat Simulator Development</i>				PROJECT 9999: <i>Congressional Adds</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	0.000	1.593	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.593
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification Congressional Add.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010			
Congressional Add: Navy Advanced Threat Simulator							0.000	1.593			
<i>FY 2010 Plans:</i> Initiate the documentation survey required prior to developing a high priority threat simulator.											
Congressional Adds Subtotals							0.000	1.593			
C. Other Program Funding Summary (\$ in Millions) N/A											
D. Acquisition Strategy Not required for Congressional Adds.											
E. Performance Metrics Not required for Congressional Adds.											

UNCLASSIFIED

R-1 Line Item #140

Page 15 of 15